554,013

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



) (CETTO ENTIRED NO BIRRO KIRRO BERNI BERNI

(43) International Publication Date 11 November 2004 (11.11.2004)

PCT

(10) International Publication Number WO 2004/097745 A1

(51) International Patent Classification7:

G06T 11/40

(21) International Application Number:

PCT/IB2004/001209

(22) International Filing Date: 15 April 2004 (15.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

0350126

24 April 2003 (24.04.2003) FF

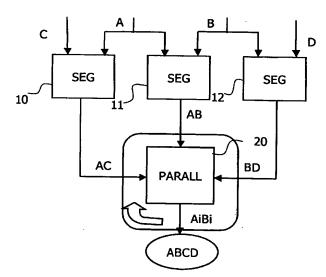
- (71) Applicant (for all designated States except US): KONIN-KLIJKE PHILIPS ELECTRONICS N.V. [NL/NL]; Groenewoudseweg 1, NL-5621 BA Eindhoven (NL).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): ZHAO, Qin [FR/FR]; c/o Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR). PASQUIER, Laurent [FR/FR]; c/o Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR). DURANTON, Marc [FR/NL];

c/o Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR).

- (74) Agent: CHAFFRAIX, Jean; Société Civile SPID, 156 Boulevard Haussmann, F-75008 Paris (FR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

[Continued on next page]

(54) Title: METHOD AND SYSTEM FOR FILLING IN A PARALLELOGRAM



(57) Abstract: The invention relates to a method of tracing and filling in a parallelogram (ABCD), comprising a first vertex (A), a second vertex (B), a third vertex (C) and a fourth vertex (D) on a discrete grid of a graphics screen from knowledge of the coordinates of its vertices. The method according to the invention comprises a step (10) of calculating the coordinates of the points on a first segment (AB) between the first vertex (A) and the second vertex (B), a step (11) of calculating the coordinates of the points on a segment (AC) between the first vertex (A) and the third vertex (C), a step (12) of calculating the coordinates of the points on a third segment (BD) between the second vertex (BD) and the fourth vertex D and an iterative step (20) of calculating the coordinates of the points on a segment parallel to the segment AB and included within the parallelogram ABCD. Advantageously, the steps of calculating coordinates of the points on a segment use a so-called mid-point algorithm or Bresenham's algorithm.







Declaration under Rule 4.17:

as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, F1, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, F1, FR, GB, GR, HU, IE, IT,

LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.